Inhibition of SHIP to Enhance Stem Cell Harvest and Transplantation

Abstract

The instant invention teaches the inhibition of SHIP expression, or function, for the increased efficacy of autologous stem cell transplants. In another embodiment, interference with SHIP function can be used to temporarily expand and mobilize the hematopoietic stem cell compartment to assist with leukapheresis, to promote hematopoietic recovery after myeloablation treatments, to deplete target stem cell clones (such a leukemic clones and other tumor stem cell types), and to deplete, or damage, the repopulating ability of the endogenous hematopoietic stem cell pool in order to allow transplanted hematopoietic stem cells to better home and engraft and to promote in vivo expansion and mobilization of other organ-specific stem cell populations (e.g., mesenchymal, mammary).